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PATENTS  
8028-1035

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Shuzo TODA

Conf. 6737

Application No. 09/941,621

Group 2143

Filed August 30, 2001

Examiner Jeffrey Pwu

DOWNLOAD SYSTEM FOR DOWNLOADING  
SOFTWARE OR DATA TO TERMINAL

**APPEAL BRIEF**

MAY IT PLEASE YOUR HONORS:

December 22, 2005

1. Real Party in Interest

The real party in interest in this appeal is the Assignee, NEC Corporation of Tokyo, Japan.

2. Related Appeals and Interferences

Neither the appellant, appellant's legal representative nor the assignee know of any other prior or pending appeals, interferences or judicial proceedings which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

3. Status of the Claims

Claims 1-2 and 5-9 are pending. Claims 3-4 are cancelled. Claims 1-2 and 5-9 are rejected, from whose final rejection this appeal is taken.

4. Status of Amendments

In response to the final rejection of May 25, 2005 ("OA"), appellant filed an amendment on August 25, 2005.

The ensuing Advisory Action of September 15, 2005 failed to indicate whether the amendment would or would not be entered for purposes of appeal; that is to say, none of blocks 3-7 were checked to indicate the status of the amendment.

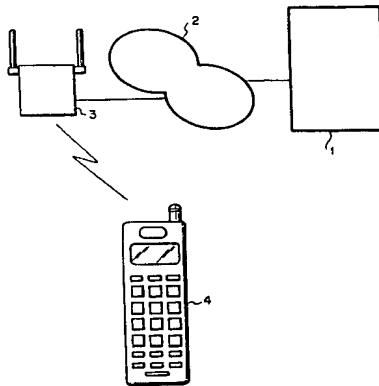
The August 25, 2005 amendment only amended claim 7 to insert the preposition "for" in the phrase "means for determining". The attached Claims Appendix reflects this amendment.

5. Summary of Claimed Subject Matter

As outlined on specification page 1, under "Field of the Invention", the present invention concerns downloading software or data to a terminal by remote operation from a center.

With reference to Figure 1 (shown below), the system includes a center 1, a network 2, a radio base station 3, and a radio terminal 4. Advantageously, the invention provides for automatically switching the terminal from an ordinary operation state to a downloadable state by transmitting a download start control signal to the terminal (specification page 3, lines 10-13). The terminal may be an ISDN terminal 7 or a telemeter 12 as illustrated in Figures 2-3.

FIG.1



Independent claims 1 and 7 are each directed to the terminal, i.e., the terminal automatically switching from a first ordinary operation state to a second download state upon receipt and recognition of a download start control signal transmitted to the terminal.

The terminals of Figures 1-3 are illustrated by Figures 4-5.

FIG.4

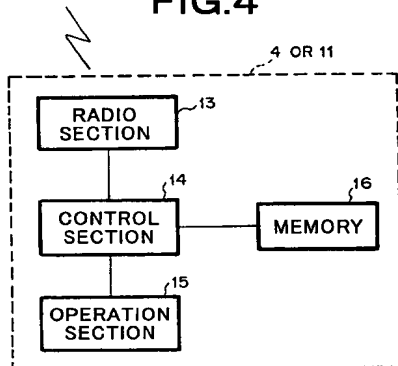
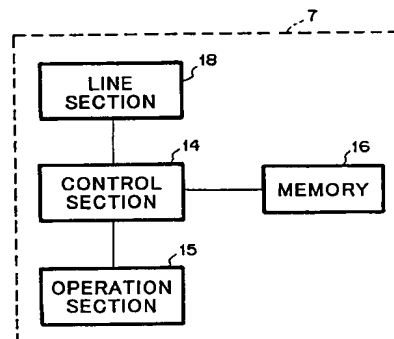


FIG.5



As illustrated, the terminals comprise an input-output section 13/18, a control section 14, a memory section 16, and an operation section 15.

Specification page 4 details that initially, a download start control signal and a state switching end notification signal are registered (stored) in the memory 16. As illustrated by Figures 1-3, the input section 13/18 receives a signal from the center 1 through the network 2. The control section 14 compares the received signal with signals registered with the memory.

If the signal transmitted from the center and received by the terminal is coincident with the download start control signal previously registered in the terminal's memory, the terminal judges that the signal from the center is a download start control signal and the terminal starts software stored in the memory for switching the state of the terminal to a download state. See specification page 4, first paragraph.

When the terminal has completed switching to the download state, the terminal reads the stored state switching end notification signal from the memory and sends that signal to the center. When receiving that signal from the terminal, the center judges that the terminal is switched to the download state and then starts transmitting software or data to the terminal. See specification page 4, second paragraph.

6. Grounds of Rejection to be Reviewed on Appeal

Two rejections are to be reviewed on appeal.

The first rejection is a rejection of all the claims under Section 112, first paragraph, as failing to comply with the written description requirement. The Examiner asserts that the claims contain subject matter not described in the specification in such a way as to reasonably convey that the inventor, at the time of the application was filed, had possession of the claimed invention (OA page 2).

The second rejection is a rejection of all the claims rejected under Section 112, second paragraph, as indefinite (OA page 3). Claim 7 was identified as reciting "means determining" instead of "means for determining".

There is no substantive rejection.

7. Arguments

Arguments Concerning the First Ground of Rejection

All claims were rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement.

On OA page 2, the Examiner states that the specification lacks written description of:

a) "means for determining whether a received signal is a download start control signal;"

b) "means for changing a state of the terminal from a first ordinary operation state to a second download state if the received signal is the download start control signal;" and

c) "means for transmitting a state switching notification signal to a sender of said download start control signal if the state of the terminal is changed to the download state;".

The Examiner further states that "It is unclear how to: determine whether a received signal is a download start control signal; change a state of the terminal from a first ordinary operation state to a second download state if the received signal is the download start control signal; and/or transmit a state switching notification signal to a sender of said download start control signal if the state of the terminal is changed to the download state."

Why the claims are proper under Section 112, 1<sup>st</sup> paragraph.

The specification shows that applicant had possession of the claimed invention at the time the application was filed.

To evaluate whether the subject matter of the claims' recitations is adequately described in the specification, so as to reasonably convey to one of skill that the inventor had possession of the claimed recitation, one needs to consider what one of skill would have understood to have been disclosed, having read and understood the application as a whole.

The Abstract discloses that the invention allows rewriting the software or data of a terminal without a user or maintenance personnel directly touching the terminal. The Abstract states that a "center has a unit ***transmitting a download start control signal to the terminal***, and a unit transmitting to-be-downloaded software or data to the terminal when receiving a state switching notification signal from the terminal". The Abstract further states that the "terminal has a unit determining whether a received signal is a download start control signal, a unit switching a state of the terminal to a download state if the received signal is the download start control signal, a unit transmitting the state switching notification signal to a sender of the download start control signal when the state of the terminal is changed to the download state, and a unit downloading the software or data after transmitting the download start switch notification signal".

Thus, the Abstract presents a summary of the application disclosure pointing out certain features of the invention.

The three rejected recitations a), b) and c), as identified by the Examiner, will be discussed in turn.

Recitation a)

Consider recitation a) as it appears in claim 1 "means for determining whether a received signal is a download start

control signal;" and as it appears in claim 7 and is further detailed in the claim 1 "wherein" clause:

"means for determining whether a received signal is a download start control signal, the means determining whether a received signal, from a signal source, is a download start control signal comprising

"a data registration memory storing data as a registered download start control signal,

"a receiving section that receives the received signal through a network, and

"a control section that i) compares the received signal with the registered download start control signal stored in the data registration memory, and ii) when the received signal is coincident with the registered download start control signal determines that the received signal is a download start control signal;".

As to recitation a), the Examiner (OA page 2, last paragraph) has asked how to "determine whether a received signal is a download start control signal".

In reading just the Abstract, one of skill would understand that the recited "received signal" is from that center that has a unit **transmitting a download start control signal to the terminal.**

The Background of the Invention section repeats that the present invention relates to a download system for



downloading software or data from a center to a terminal. See also the Summary of the Invention section, especially page 2, first full paragraph, disclosing a center transmitting a download start control signal to the terminal.

The Detailed Description of the Invention section beginning at specification page 3, discloses that the present invention automatically switches the state of a terminal from an ordinary operation state to a downloadable state by transmitting a download start control signal to the terminal. Although this passage does not explicitly state that the download start control signal is from the center, this is implicit and one of skill would understand that the download start control signal is from the center. Further, Figure 1 illustrates the radio base station 3 connected via a network to center 1, the radio base station 3 being shown in communication with terminal 4.

Figure 4 shows a block diagram of one terminal 4 and Figure 5 shows a block diagram of another terminal 7. Page 4, lines 5 *et seq.* disclose that radio station 13 or line section 18 receives a signal from the center 1 through the network 2. Thus, receipt of the signal is clearly disclosed.

The specification further discloses a control section 14 compares the received signal with signals registered with the memory. ***If the signal from the center 1 is coincident with the download start control signal registered in advance,*** the terminal judges that the signal from the center 1 is ***a download***

**start control signal.** Accordingly, the terminal starts software stored in the memory 16 for switching the state of the terminal to a download state.

One of skill would understand that "signals registered with the memory" discloses data representing a download start control signal having been stored in the memory 16 of the terminal.

Claim 7 follows this disclosure in reciting:

a data registration memory storing data as a registered download start control signal -- see memory 16 of Figures 4-5;

a receiving section that receives the received signal through a network -- see radio section 13 and line section 18;  
and

a control section that i) compares the received signal with the registered download start control signal stored in the data registration memory, and ii) when the received signal is coincident with the registered download start control signal determines that the received signal is a download start control signal; -- see operation section 15.

In view of this identified disclosure, it is clear that applicant has disclosed how to determine whether a received signal is a download start control signal. Thus, applicant had possession of this aspect of the claimed invention at the time of filing the application.

Recitation b)

Recitation b) is: "means for changing a state of the terminal from a first ordinary operation state to a second download state if the received signal is the download start control signal".

The Detailed Description of the Invention section discloses that the invention provides a system for automatically switching the state of a terminal from an ordinary operation state to a downloadable state. Specification page 3, lines 10-17, discloses that the terminal may be, e.g., a mobile radio terminal such as a PHS terminal or an ISDN terminal, or a PHS terminal. It is also disclosed that the download state relates to software, data or the like to be downloaded to the terminal.

One of skill would understand that these terminals have a normal operation state, e.g., the operation state where the terminals are fulfilling their normal purpose/function. One of skill would also understand that a downloadable state refers to a state where the terminal is set to a "download state" ready to download software, data, or the like.

The functional language would require that the terminal be changed from a first ordinary operation state to a second download state. The nature of each of these first and second states is clear. The functional language include a conditional "if" statement that causes the terminal to be changed from the

first to the second state; that is, "if the received signal is the download start control signal".

Identifying how to determine if the received signal is the download start control signal was previously discussed above.

In view of this identified disclosure, there is clear disclosure of the nature of the two states and upon what condition the terminal is changed from the first state to the second state. Thus, appellant had possession of these claimed features of the invention at the time of filing the application.

Recitation c)

Recitation c) is "means for transmitting a state switching notification signal to a sender of said download start control signal if the state of the terminal is changed to the download state".

See that Figures 1-3 illustrate the terminal and center being in bi-directional communication. Figures 4-5 illustrate a radio input-output section 13 and a line input-output section 18.

One of skill would understand that the terminal can send a transmission to the center using the radio section or the line section.

One of skill would also understand that the transmission could include "a state switching notification signal" of desired/appropriate form. Thus, the basis of the 112 rejections appears to be in the conditional language of the

recitation, i.e., "if the state of the terminal is changed to the download state".

From the above discussions, the state of the terminal would be changed to the download state (from the first ordinary operation state to the second download state) if the received signal from the center was verified as a download start control signal.

Again, see specification page 4, lines 8 *et seq.* "If the signal from the center 1 is coincident with the download start control signal registered in advance, the terminal 4, 11 or 7 judges that the signal from the center 1 is a download start control signal. Accordingly, the terminal 4, 11 or 7 starts a software stored in the memory 16 for switching the state of the terminal to a download state."

One of skill would understand that this stored software for switching that state of the terminal to the download state would accomplish the recited action of changing the terminal to the download state. Upon completing the change to the download state, the condition "if" requirement of recitation c) is satisfied and the radio section or line section transmits a state switching notification signal to the center (a sender of said download start control signal) as the state of the terminal has been changed to the download state. This action is disclosed as a state switching end notification.

At line 13 of specification page 4, there is specific disclosure concerning sending a state switching end notification. That is, the disclosure is that "[w]hen switching to the downloadable state is completed, the terminal 4, 11 or 7 reads a state switching end notification signal from the memory 16 and notifies the state switching end notification signal to the center 1 from the radio section 13 or the line section 18 through the network 2." Here the term "notifies" would be understood to mean transmit (as recited by recitation c)).

A specific concrete embodiment is disclosed beginning at line 23 of specification page 4.

In this specification section, there is disclosure that a method in which a download start control signal and a state switching end notification signal are **set as sub-addresses**. The sub-address is defined as meaning "a signal representing additional information transmitted together with telephone number information".

See the passage beginning with the last line of specification page 4:

The terminal 4, 11 or 7 registers a sub-address "000" as the download start control signal and a sub-address "999" as the state switching end notification signal in the memory 16. To execute downloading, the center 1 calls a terminal 4, 11 or 7 through the network 2 and transmits the sub-address "000" to the terminal 4, 11 or 7. The terminal 4, 11 or 7 receives the sub-address "000" at radio section 13 or the line section 18. The control section 14 compares the received sub-address with the sub-address registered with the memory in advance. As a result of the comparison,

since the received sub-address "000" is coincident with the download start control sub-address "000", the terminal 4, 11 or 7 judges that the sub-address transmitted from the center 1 is a request to switch the state of the terminal to the download state. Next, the terminal 4, 11 or 7 starts a software for switching the state of the terminal to the download state from the memory 16. As soon as the switching of the state is completed, the terminal 4, 11 or 7 calls the center 1, reads the sub-address "999" indicating state switching completion from the memory 17 and transmits the sub-address "999" thus read to the center 1. When receiving the sub-address "999", the center 1 judges that the terminal 4, 11 or 7 is completed with switch to the download state, and starts transmitting software or data to the terminal 4, 11 or 7. The terminal 4, 11 or 7 downloads the software or the data transmitted from the center 1 and stores the software or the data in the memory 16.

Thus, there is clear disclosure of the recited invention and an example of how to make/execute the functional language, i.e., that appellant had possession of these features of the claimed invention at the time of filing the application.

Appellant has further disclosed alternative approaches to accomplish the recited functions (the paragraph spanning specification pages 5-6):

In the above-stated embodiment, the sub-addresses are the download start control signal and the state switching end notification signal, respectively. Alternatively, a PB (Push Button) tone, UUI (User-to user Information) or the like may be used as a download start control signal and a state switching end notification signal. The PB tone means herein the tone of the button, which has been depressed, of the terminal. The UUI means herein a function for exchanging short messages of 128 octets (bytes) or less between users using an ISDN D channel.

Thus, appellant has clearly disclosed the recited invention and an example of how to make/execute the functional language.

In summary, for each of recitations a), b), and c), the Section 112, first paragraph requirements are satisfied in that it is clear that appellant had possession of the claimed invention at the time of filing the application. Thus, this rejection is improper.

Arguments Concerning the Second Ground of Rejection

All the claims were rejected under Section 112, second paragraph, as indefinite.

On OA page 3, the Examiner states that applicant has failed to particularly point out and distinctly claim the following:

a) "means for determining whether a received signal is a download start control signal;"

b) "means for changing a state of the terminal from a first ordinary operation state to a second download state if the received signal is the download start control signal;" and

c) "means for transmitting a state switching notification signal to a sender of said download start control signal if the state of the terminal is changed to the download state;".



On OA page 4, specifically as to claim 7, the Examiner objects to the omission of the term "for" between the terms "means" and "determining". Claim 7 has been responsively amended and this issue is believed resolved.

Why the claims are proper under Section 112, 2<sup>nd</sup> paragraph.

Apologies are offered in advance for the following arguments being necessarily somewhat duplicative of the above arguments.

The claims are definite. Further, the structures recited are disclosed in the specification in a way that one skilled in the art would understand what structure will perform any recited function.

The Abstract discloses a center initiating a download sequence by transmitting a download start control signal to the terminal to switch the terminal to a "download state", and the terminal transmitting a state switching notification signal when the terminal has switched to the download state back to the center in order to indicate that the terminal is ready for the download and to trigger the center to begin the download.

The Abstract details the terminal determining whether a received signal is a download start control signal, switching a state of the terminal to a download state if the received signal is the download start control signal and transmitting the state switching notification signal to the center when the state of the

terminal is changed to the download state, and finally, performing the download.

Recitation a)

Recitation a) is:

"means for determining whether a received signal is a download start control signal, the means determining whether a received signal, from a signal source, is a download start control signal comprising

"a data registration memory storing data as a registered download start control signal,

"a receiving section that receives the received signal through a network, and

"a control section that i) compares the received signal with the registered download start control signal stored in the data registration memory, and ii) when the received signal is coincident with the registered download start control signal determines that the received signal is a download start control signal;".

The specification discloses how to "determine whether a received signal is a download start control signal". The Abstract discloses the recited "received signal" is from the center that has a unit **transmitting a download start control signal to the terminal**. The Background of the Invention section discloses a download system for downloading software or data from a center to a terminal. The Summary of the Invention section,

especially page 2, first full paragraph, indicates a center transmitting a download start control signal to the terminal.

The Detailed Description of the Invention section, beginning at specification page 3, discloses automatically switching the state of a terminal from an ordinary operation state to a downloadable state by transmitting a download start control signal to the terminal. Figure 1 illustrates the radio base station 3 connected via a network to center 1, the radio base station 3 being shown in communication with terminal 4.

Figure 4 shows a block diagram of one terminal 4 and Figure 5 a block diagram of another terminal 7. Page 4, lines 5 et seq. disclose that radio station 13 or line section 18 receives a signal from the center 1 through the network 2.

A control section 14 compares the received signal with signals registered with the memory. If the signal from the center 1 is coincident with the download start control signal registered in advance, the terminal judges that the signal from the center 1 is a download start control signal. Accordingly, the terminal starts software stored in the memory 16 for switching the state of the terminal to a download state.

One of skill would understand that "signals registered with the memory" discloses data representing a download start control signal having been stored in the memory 16 of the terminal.

Claim 7 recites:

a data registration memory storing data as a registered download start control signal -- see memory 16 of Figures 4-5;

a receiving section that receives the received signal through a network -- see radio section 13 and line section 18;  
and

a control section that i) compares the received signal with the registered download start control signal stored in the data registration memory, and ii) when the received signal is coincident with the registered download start control signal determines that the received signal is a download start control signal; -- see operation section 15.

In view of the identified disclosure, there is clear disclosure of how to determine whether a received signal is a download start control signal. Thus, as to these recited features, the claims are definite under 112, second paragraph.

Recitation b)

Recitation b) is "means for changing a state of the terminal from a first ordinary operation state to a second download state if the received signal is the download start control signal".

This recitation is definite in that the Detailed Description of the Invention section discloses that the invention provides a system for automatically switching the state of a terminal from an ordinary operation state to a downloadable

state. Page 3, lines 10-17, disclose that the terminal may be, e.g., a mobile radio terminal such as a PHS terminal or an ISDN terminal, or a PHS terminal. It is also disclosed that the download state relates to software, data or the like to be downloaded to the terminal.

One of skill would understand that these terminals have a normal operation state, e.g., the operation state where each terminal is fulfilling its normal purpose/function. One of skill would also understand that a downloadable state refers to a state where the terminal is set to a "download state" ready to download software, data, or the like.

The functional language would require that the terminal be changed from a first ordinary operation state to a second download state. The nature of each of these first and second states is clear. The functional language includes a conditional "if" statement that causes the terminal to be changed from the first to the second state; that is, "if the received signal is the download start control signal". Identifying how to determine if the received signal is the download start control signal was previously discussed.

In view of this identified disclosure, there is clear disclosure of the nature of the two states and upon what condition the terminal is changed from the first state to the second state. Thus, this portion of the claim is definite under 112, second paragraph.

Recitation c)

Recitation c) is "means for transmitting a state switching notification signal to a sender of said download start control signal if the state of the terminal is changed to the download state".

One of skill would understand that the terminal can send a transmission to the center using the radio section or the line section. One of skill would also understand that the transmission could include "a state switching notification signal" of desired/appropriate form. One of skill would also understand the recitation of "if the state of the terminal is changed to the download state".

From the above, the claims clearly recite that the state of the terminal would be changed to the download state (from the first ordinary operation state to the second download state) if the received signal from the center was a download start control signal.

From specification page 4, lines 8 *et seq.* "If the signal from the center 1 is coincident with the download start control signal registered in advance, the terminal 4, 11 or 7 judges that the signal from the center 1 is a download start control signal. Accordingly, the terminal 4, 11 or 7 starts a software stored in the memory 16 for switching the state of the terminal to a download state."

One of skill would understand that this stored software for switching that state of the terminal to the download state would accomplish the recited action of changing the terminal to the download state. Upon completing the change to the download state, the condition "if" requirement of recitation c) is satisfied and the radio section or line section transmits a state switching notification signal to the center (a sender of said download start control signal) as the state of the terminal has been changed to the download state. This action is disclosed as a state switching end notification.

At line 13 of specification page 4, there is specific disclosure concerning sending a state switching end notification. That is, the disclosure is that "[w]hen switching to the downloadable state is completed, the terminal 4, 11 or 7 reads a state switching end notification signal from the memory 16 and notifies the state switching end notification signal to the center 1 from the radio section 13 or the line section 18 through the network 2." Here, the term "notifies" would be understood to mean transmit (as recited by recitation c)).

A specific concrete embodiment is disclosed beginning at line 23 of specification page 4.

In this disclosure section, there is disclosed that a method in which a download start control signal and a state switching end notification signal are set as sub-addresses. The sub-address is defined as meaning "a signal representing

additional information transmitted together with telephone number information".

See the passage beginning with the last line of specification page 4:

The terminal 4, 11 or 7 registers a sub-address "000" as the download ... stores the software or the data in the memory 16.

Thus, there is clear disclosure of the recited invention and an example of how to make/execute the functional language. There is further disclosed alternative approaches to accomplish the recited functions (the paragraph spanning specification pages 5-6):

In the above-stated embodiment, the sub-addresses are the download start ... octets (bytes) or less between users using an ISDN D channel.

Again, there is clear disclosure of the recited invention including how to make/execute the functional language. Thus, these recitations are also clear, i.e., definite under 112, second paragraph.

Having addressed each of recitations a), b), and c), it is clear that Section 112, second paragraph, is satisfied. The Section 112, second paragraph rejection is therefore improper.



In view of the above, each of the rejections are believed to be improper and should be reversed. Reversal of these rejections is accordingly respectfully requested.

Respectfully submitted,

YOUNG & THOMPSON



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8. Claims Appendix:

1. A terminal that automatically switches from a first ordinary operation state to a second download state utilizing a download start control signal transmitted to the terminal, comprising:

means for determining whether a received signal is a download start control signal;

means for changing a state of the terminal from a first ordinary operation state to a second download state if the received signal is the download start control signal;

means for transmitting a state switching notification signal to a sender of said download start control signal if the state of the terminal is changed to the download state; and

means for downloading one of software and data after transmitting said state switching notification signal, wherein,

the means for determining whether a received signal is a download start control signal comprises

a memory for storing data as a registered download start control signal and data as a registered state switching end notification signal,

a receiving section that receives the received signal through a network, and

a control section that i) compares the received signal with the registered download start control signal stored in the memory, and ii) when the received signal is coincident with the

registered download start control signal determines that the received signal is a download start control signal.

2. The terminal according to claim 1, wherein each of said download start control signal and said state switching notification signal is transmitted as one of a sub-address, a push button tone and user-to-user information.

5. A system for downloading one of software and data to a terminal, comprising the terminal according to claim 1 and a center comprising:

means for transmitting a download start control signal to the terminal; and

means for transmitting one of software and data to be downloaded to said terminal, when receiving a state switching notification signal from said terminal.

6. A system for downloading one of software and data to a terminal, comprising the terminal according to claim 2 and a center comprising:

means for transmitting a download start control signal to the terminal;

means for transmitting one of software and data to be downloaded to said terminal, when receiving a state switching notification signal from said terminal; and

wherein each of said download start control signal and said state switching notification signal is transmitted as one of a sub-address, a push button tone and user-to-user information.

7. A terminal that automatically switches from a first ordinary operation state to a second download state utilizing a download start control signal transmitted to the terminal, comprising:

means for determining whether a received signal is a download start control signal, the means determining whether a received signal, from a signal source, is a download start control signal comprising

a data registration memory storing data as a registered download start control signal,

a receiving section that receives the received signal through a network, and

a control section that i) compares the received signal with the registered download start control signal stored in the data registration memory, and ii) when the received signal is coincident with the registered download start control signal determines that the received signal is a download start control signal;

means for changing a state of the terminal from a first ordinary operation state to a second download state upon the

received signal being determined, by the control section, to be the download start control signal;

means for transmitting a state switching notification signal to a sender of said download start control signal if the state of the terminal is changed to the download state; and

means for downloading one of software and data after transmitting said state switching notification signal.

8. The terminal of claim 7, wherein,

the data registration memory further store data as registered state switching end notification signal data,

upon the means for changing a state of the terminal changing the state from the first ordinary operation state to the second download state, the registered state switching end notification signal is read from the memory and transmitted as a state switching notification signal, through the network, to the signal source as a notification of the terminal being switched to the second download state.

9. The terminal according to claim 8, wherein each of the download start control signal and the state switching notification signal is transmitted as one of a sub-address, a push button tone and user-to-user information.